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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/852,815

05/10/2001

Russell R. Graze, JR.

98-281

5492

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7590

04/22/2003

CATERPILLAR INC.  
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PATENT DEPT.  
PEORIA, IL 616296490

EXAMINER

RAEVIS, ROBERT R

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/852,815**

Applicant(s)  
**Graze, Jr**

Examiner  
**Robert Raevis**

Art Unit  
**2856**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 25 is/are rejected.
- 7) ☒ Claim(s) 16-24 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3 20) ☐ Other: \_\_\_\_\_

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1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 114 (page 4, lines 3, 7).

Should the "144" in Figure 1 read -- 114 --? Correction is required.

2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1; "said gas stream" (line 11) lack antecedent basis. ✓

As to claim 5; "on" (second line of the claim) should read -- one --. ✓

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over d'Appollonia et al.

d'Appollonia et al teach (Figure 1) a gas sampling system, including: diluters D1, D2 arranged in a fluidly serial manner; source 100 of dilution air fluidically connected to each of the diluters to supply gas so as to supply diluting gas into each of the diluters such that the diluting gas is supplied into the gas stream present within each of the diluters so as to progressively dilute the gas stream as the stream flows through the plurality of serially arranged diluters; and sampling

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apparatus U1, U2 fluidically connected to each of the diluters for obtaining and analyzing a sample of the diluted gas stream present with each one of the diluters.

d'Appollonia does not state that the inert gas is air, and the written specification does not state that the diluters are along an axial extent.

As to claim 1; while d'Appollonia states that the gas is "*typically* an inert gas such as nitrogen or argon" (italics added, col. 2, line 60), it is known to use air to dilute samples of gas to be analyzed. Also, the diluters D1 and D2 are arranged "along an axial extent" because either (1) they are along the same fluid axis, as defined by the lines directly connecting D1 and D2 that includes q11, or (2) D1 and D2 (along with the remaining diluters) appear to be vertically aligned along the same axis in Fig. 1.

As to claims 2 and 3; it is known to dilute sample streams containing particles for particle analysis, suggestive of use of d'Apollonia's system to provide a system to calibrate any known particle sensing apparatus.

5. Claims 13-15, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over d'Appollonia et al in view of Graze, Jr.

Comments that exist above regarding claims 1-3 similarly apply here.

As to claims 13 and 25, it is known to dilute sample streams containing particles for particle analysis, suggestive of use of d'Apollonia's system to provide a system to calibrate any known particle sensing apparatus. In addition, note that Graze, Jr. suggests that exhaust gas is

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commonly analyzed for content, suggestive of use of an exhaust gas particle analyzers in d'Appollonia.

6. Claims 16-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to R. Raevis whose telephone number is (703) 305-4919. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

*Raevis*